

AOPC/OOPC Mean Sea Level Pressure Working Group

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2003**

Presentation Outline

**Overview of the Surface Pressure Group Workshop, Norwich 20th –21st
November, 2002**

Current activities under the Group's Terms of Reference

Upcoming Events & Issues

Atmospheric Observation Panel for Climate (AOPC): Surface Pressure Group Workshop Norwich 20th –21st November, 2002

Present were representatives from France, Italy, Spain, UK, Chile, Switzerland, Germany, USA, Russia, Sweden, Netherlands, Canada. A number of these participants stayed on from the EC-funded European and North Atlantic daily to MULTidecadal climATE variability (EMULATE) project start up meeting.

Workshop outline

Day 1: Presentations on Historical MSLP data: compilations and quality control

Day 2: Presentations on Historical MSLP: analyses and data extensions

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David Wuertz : **GHCN project**

Rob Allan: **Hadley Centre MSLP data base**

Gil Compo: **Comparison of ICOADS ship observations with US Historical Weather Maps 1899-1939**

Vicky Slonosky: **Canadian historical MSLP data & future plans**

Theo Brandsma: **Dutch & colonial (Indonesian & Japanese) historical MSLP**

Lars Barring: **Historical MSLP data from Estonia & Poland**

Victor Lagun: **Russian historic Antarctic surface pressure data management**

Phil Jones: **Summary of EMULATE meeting**

Maurizio Maugeri: **Air pressure data in Italy**

Day 2: Presentations on Historical MSLP: analyses and data extensions

Anders Moberg: **Historical MSLP data from Norway, Sweden and Finland**

Gil Compo: **Feasibility of reanalysis before the radiosonde era**

Shyh Chen: **Surface pressure observation: a view from Reanalysis**

Rob Allan (for Nathan Gillett): **Trends in HadSLP and MSLP data**

Scott Woodruff: **ICOADS data**

Tara Ansell: **A new version of HadSLP using ICOADS data**

(A summary of each presentation is available on the Climatic Research Unit,
University of East Anglia's web site at
<http://www.cru.uea.ac.uk/cru/projects/emulate/>)

Current activities under the Group's Terms of Reference

International atmospheric pressure data base

(Norwich Workshop 2002)

- Aim to set up an international monthly pressure data base for the globe.
- Also a separate data base of sub daily observations and, accordingly, the development of a international operational pressure data base.
- David Wuertz and Gil Compo volunteered to be administrators of the monthly and operational data bases respectively, with input from the Hadley Centre.
- No final decision was made about the inclusion of other variables such as wind speed and direction in the data bases and it was agreed to keep this issue open for later discussions.
- The group agreed, if resources permit, it is better to digitise a number of variables at one time, rather than just pressure.
- The need to adopt a uniform data format was recognised. We will work towards using the International Maritime Meteorological Archive (IMMA) format, or a variant thereof, and adapt this to work with terrestrial pressure observations. It is however best suited for the operational rather than monthly data base. *Details of this format are now available as a separate pdf document.*

Outstanding data issues

(Norwich Workshop 2002)

- Need to compare various pressure holdings with the scanned images on the NOAA library site (http://docs.lib.noaa.gov/rescue/data_rescue_home.html). There are some gaps in NOAA images, and it would be desirable to fill in the missing years.
- Rob Allan and Tara Ansell will check for the Hong Kong daily records in the Met Office's library. *We have found some daily observations from 1853-1862, 1866-1886 since the meeting. We will keep searching!*
- David Parker will investigate the Gordon Manley pressure records. *Since the meeting David has been able to find evidence that Gordon Manley did indeed collate pressure observations and there appears to be coverage for London from 1770.*
- We have the potential to take the London and Paris records back to the 17th Century, possibly earlier. Phil Jones commented that despite their relatively close proximity, London and Paris are quite different series and actually provide a good measure of the North Atlantic Oscillation (NAO).

Reanalysis fields

(Norwich Workshop 2002)

The group agreed to Phil Jones' recommendation to write a formal letter, acting on behalf of AOPC, to ECMWF requesting that their reanalysis data be made freely available. *The co-convenors of the AOPC pressure working group will write the letter, to then be approved by the members of AOPC and forwarded on to ECMWF by the head of AOPC.*

Homogenisation of series

(Norwich Workshop 2002)

Phil Jones requested that series being homogenised should be done so according to the current operating standard (i.e. observing hours and/or averaging scheme), thereby preventing the need for further adjustments when blending in current observations.

Errors

(Norwich Workshop 2002)

One recommendation from the Boulder Workshop in 2002 was to produce, in time for the 4th IPCC assessment, grid box uncertainties and error covariance structures in gridded MSLP products. The group was asked to consider the following issues:

- Can we look simply at the number of observations per day?
- Are there any consistent errors, such as urbanisation effects with temperature?
- Any gross potential bias?
- Do we want to ignore / reject the very high altitude stations or how should we handle them?

This will be reviewed at follow-up meetings.

Historical wind data

(Boulder Meeting 2002)

The Terms of Reference of the AOPC/OOPC MSLP Working Group should be expanded to include the homogenisation and analysis of surface winds, especially over the oceans, and their consistency with surface pressure.



Upcoming Events & Issues

- Replacement of Ed Harrison as Co-convenor of the Group by Gil Compo.
- Proposal for an informal meeting of Group members who are attending the CLIMAR-II Workshop, Brussels, Belgium, 17-22nd November 2003.
- Atmospheric pressure sensors on drifting buoys, especially in the Southern Ocean.
- Formal approach to meteorological services to liaise with the Group on the construction, extension and quality control of long barometric pressure data series for the international atmospheric pressure data base. This would include hard copy records and digitised data, which would be quality controlled and ultimately fed back to these services and be available through the international data base.
- Letter from AOPC to ECMWF concerning re-analysis data being made freely available.